FOURTH SATELLITE.

Argument.	*For.*	*Read.*
$U-\pi'$	$^s\ ^\circ$ 0 3·4178 + i 16·5123047	$^s\ ^\circ$ 0 3·4181 + i 16·5123037
$U-u_o$	9 6·1550 + i 15·1203809	9 8·1553 + i 15·1203800
$u_{iii}-u_{iv}$	2 24·9629 + i 121·6066164	2 24·9726 + i 121·6066143
$u_{ii}-u_{iv}$	3 16·2853 + i 256·9946780	3 16·3121 + i 256·9946770
$u_{iv}-\pi_{iv}$	6 3·4433 + i 1·3600749	6 3·4506 + i 1·3600734
$u_{iv}-\pi_{iii}$	1 18·9271 + i 1·2726106	1 18·9343 + i 1·2725873
$u_{iv}-\Pi$	1 20·5205 + i 1·3921007	1 20·5277 + i 1·3920776
$u_{iv}-\Lambda_{iv}$	+ i 1·4238223	+ i 1·4237991
$u_{iv}-\Lambda_{iii}$	6 10·4045 + i 1·5092494	6 10·4118 + i 1·5092261
$u_{iv}-\Lambda_{ii}$	8 21·9415 + i 1·9461073	8 21·9488 + i 1·9461056

The greater number of these corrections are included in Adams' list mentioned above, and have therefore been applied in forming the times of eclipses given in the *Nautical Almanac* since 1881.

I suppose it is generally known that both the coefficient and argument of the inequality depending on the Great Inequality of *Jupiter* and *Saturn* (included in Damoiseau's Table III for the Second, Third, and Fourth Satellites) are erroneous. According to Souillart, the value of the argument is $5\bar{u}-2u_o-16^\circ 633$; and the coefficients are $0^s{\cdot}711$, $2^s{\cdot}110$, and $11^s{\cdot}644$ for the Second, Third, and Fourth Satellites respectively. In the continuation of Adams' Tables, used in the *Nautical Almanac* for 1891 and subsequent years, Adams appears to have adopted nearly identical expressions to those found by Souillart for these inequalities.

Nautical Almanac Office:
1892 *June* 9.

Data for computing the Positions of the Satellites of Jupiter, 1892.

By A. Marth.

The following data for computing the positions of the satellites during the present apparition of *Jupiter* correspond to the data for the preceding apparition on pages 518–523 of Vol. 51 of the *Monthly Notices*. The motions of the longitude and of arguments and the inequalities corresponding to the arguments are to be found there on pages 524–539.

First Satellite.

Greenwich Noon.	Longitude. $l_1 - 0$	S_1	Arguments. α_1	β_1	γ_1	δ_1	ϵ_1
1892.	°	°					
May 21	227·7103	+·c081	·1411	·035	·882	·057	·259
31	102·5999	80	·8141	·454	·530	·709	·284
June 10	337·4894	80	·4871	·872	·179	·362	·319
20	212·3790	79	·1601	·290	·827	·014	·333
30	87·2686	79	·8332	·708	·475	·666	·358
July 10	322·1581	+·0078	·5062	·127	·124	·319	·383
20	197·0477	78	·1792	·545	·772	·971	·407
30	71·9372	78	·8522	·963	·420	·623	·432
Aug. 9	306 8268	77	·5252	·381	·0 8	·275	·457
19	181·7164	77	·1982	·800	·717	·928	·481
29	56·6059	76	·8712	·218	·365	·580	·506
Sept. 8	291·4955	+·0076	·5442	·636	·013	·232	·531
18	166·3850	75	·2173	·054	·662	·884	·555
28	41·2746	75	·8903	·473	·310	·537	·580
Oct. 8	276·1642	74	·5633	·891	·958	·189	·605
18	151 0537	74	·2363	·309	·607	·841	·630
28	25·9433	74	·9093	·727	·255	·494	·654
Nov. 7	260·8328	+·0073	·5823	·146	·903	·146	·679
17	135·7224	73	·2553	·564	·552	·798	·704
27	10·6120	72	·9284	·982	·200	·450	·728
Dec. 7	245·5015	72	·6014	·400	·848	·103	·753
17	120·3911	71	·2744	·819	·497	·755	·778
27	355·2806	71	·9474	·237	·145	·407	·802
1893.							
Jan. 6	230·1702	+·0070	·6204	·655	·793	·059	·827
16	105·0598	70	·2934	·073	·442	·712	·852
26	339·9493	69	.9664	·492	·090	·364	·876
Feb. 5	214·8389	69	·6394	·910	·738	·016	·901
15	89·7284	68	·3125	·328	·387	·668	·926
25	324·6180	68	·9855	·746	·035	·321	·951
Mar. 7	199·5076	+·0068	·6585	·165	·683	·973	·975

	Inclination. γ_1	Node. $0 - \Gamma_1$		Inclination. γ_1	Node. $0 - \Gamma_1$
1892 May 11	°·0083	113°·0	1892 Oct. 8	°·0084	117°·0
June 10	83	113·7	Nov. 7	84	118·0
July 10	83	114·5	Dec. 7	85	119·0
Aug. 9	84	115·3	1893 Jan. 6	85	120·0
Sept. 8	84	116·1	Feb. 5	86	121·1
Oct. 8	84	117·0	Mar. 7	86	122·3

Greenwich Noon.	*First Satellite.* Arguments. ζ_1	η_1	θ_1	*Second Satellite.* Longitude. l_2-O	S_2	Arguments. α_2	β_2
1892.				°	°		
May 21	·163	·584	·418	22·3110	+·0048	·07055	·035
31	·185	·605	·438	316·0583	46	·90706	·454
June 10	·207	·625	·459	249·8055	45	·74357	·872
20	·228	·646	·479	183·5528	43	·58007	·290
30	·250	·667	·500	117·3001	41	·41658	·708
July 10	·272	·688	·521	51·0473	+·0040	·25309	·127
20	·294	·708	·541	344·7946	38	·08959	·545
30	·315	·729	·562	278·5418	36	·92610	·963
Aug. 9	·337	·750	·582	212·2891	35	·76260	·381
19	·359	·771	·603	146·0363	34	·59911	·800
29	·381	·791	·624	79·7836	32	·43562	·218
Sept. 8	·402	·812	·644	13·5308	+·0030	·27212	·636
18	·424	·833	·665	307·2781	28	·10863	·054
28	·446	·854	·685	241·0254	26	·94514	·473
Oct. 8	·468	·874	·706	174·7726	25	·78164	·891
18	·489	·895	·727	108·5199	23	·61815	·309
28	·511	·916	·747	42·2671	21	·45466	·727
Nov. 7	·533	·937	·768	336·0144	+·0020	·29116	·146
17	·555	·957	·788	269·7616	18	·12767	·564
27	·576	·978	·809	203·5089	16	·96418	·982
Dec. 7	·598	·999	·829	137·2562	15	·80068	·400
17	·620	·020	·850	71·0034	13	·63719	·819
27	·642	·040	·871	4·7507	11	·47369	·237
1893.							
Jan. 6	·663	·061	·891	298·4979	+·0010	·31020	·655
16	·685	·082	·912	232·2452	08	·14671	·073
26	·707	·102	·932	165·9924	07	·98321	·492
Feb. 5	·729	·123	·953	99·7397	05	·81972	·910
15	·750	·144	·974	33·4869	03	·65623	·328
25	·772	·165	·994	327·2342	02	·49273	·746
Mar. 7	·794	·185	·015	260·9815	·0000	·32924	·165

	Inclination. γ_2	Node. $O-\Gamma_2$	
1892.	°	°	
May 11	0·4904	129·16	95
June 10	·4902	130·11	96
July 10	·4899	131·07	95
Aug. 9	·4897	132·02	96
Sept. 8	·4895	132·98	96
Oct. 8	0·4892	133·94	

Second Satellite.

Greenwich Noon. 1892.	Arguments. γ_2	δ_2	ϵ_2	ζ_2	η_2	θ_2	ι_2	κ_2	λ_2
May 21	·907	·487	·653	·163	·084	·918	·759	·654	·488
31	·722	·302	·469	·185	·105	·938	·784	·512	·345
June 10	·537	·118	·285	·207	·125	·959	·809	·369	·202
20	·352	·934	·101	·228	·146	·979	·833	·226	·059
30	·166	·750	·917	·250	·167	·000	·858	·083	·917
July 10	·981	·565	·733	·272	·188	·021	·883	·941	·774
20	·796	·381	·548	·294	·208	·041	·907	·798	·631
30	·611	·197	·364	·315	·229	·062	·932	·655	·488
Aug. 9	·425	·013	·180	·337	·250	·082	·957	·512	·345
19	·240	·828	·996	·359	·271	·103	·981	·370	·202
29	·055	·644	·812	·381	·291	·124	·006	·227	·059
Sept. 8	·870	·460	·628	·402	·312	·144	·031	·084	·916
18	·684	·276	·444	·424	·333	·165	·055	·941	·773
28	·499	·092	·260	·446	·354	·185	·080	·799	·630
Oct. 8	·314	·907	·076	·468	·374	·206	·105	·656	·488
18	·129	·723	·892	·489	·395	·227	·130	·513	·345
28	·944	·539	·708	·511	·416	·247	·154	·370	·202
Nov. 7	·758	·355	·523	·533	·437	·268	·179	·228	·059
17	·573	·170	·339	·555	·457	·288	·204	·085	·916
27	·388	·986	·155	·576	·478	·309	·228	·942	·773
Dec. 7	·203	·802	·971	·598	·499	·329	·253	·799	·630
17	·017	·618	·787	·620	·520	·350	·278	·657	·487
27	·832	·433	·603	·642	·540	·371	·302	·514	·344
1893. Jan. 6	·647	·249	·419	·663	·561	·391	·327	·371	·201
16	·462	·065	·235	·685	·582	·412	·352	·228	·059
26	·276	·881	·051	·707	·602	·432	·376	·086	·916
Feb. 5	·091	·696	·867	·729	·623	·453	·401	·943	·773
15	·906	·512	·683	·750	·644	·474	·426	·800	·630
25	·721	·328	·498	·772	·665	·494	·451	·657	·487
Mar. 7	·535	·144	·314	·794	·685	·515	·475	·515	·344

	Inclination. γ_2	Node. $\Omega-\Gamma_2$	
1892 Oct. 8	°0·4892	°133·94	96
Nov. 7	·4890	134·90	96
Dec. 7	·4887	135·86	97
1893 Jan. 6	·4885	136·83	96
Feb. 5	·4882	137·79	97
Mar. 7	0·4880	138·76	

Third Satellite.

Greenwich Noon.	Longitude. l_3-0	S_3	Arguments. α_3	β_3	γ_3	δ_3	ϵ_3
1892.	°	°					
May 21	189·6114	+·0039	·9513	·1177	·0353	·328	·619
31	332·7875	37	·3489	·5154	·4535	·127	·058
June 10	115·9636	35	·7464	·9130	·8718	·925	·497
20	259·1397	33	·1439	·3107	·2900	·724	·936
30	42·3158	31	·5414	·7083	·7083	·523	·375
July 10	185·4919	+·0029	·9389	·1060	·1265	·321	·814
20	328·6680	27	·3364	·5036	·5448	·120	·253
30	111·8441	25	·7339	·9013	·9630	·918	·692
Aug. 9	255·0202	23	·1314	·2990	·3813	·717	·131
19	38·1963	21	·5289	·6996	·7996	·515	·570
29	181·3724	19	·9265	·0943	·2178	·314	·009
Sept. 8	324·5485	+·0017	·3240	·4919	·6361	·112	·448
18	107·7246	15	·7215	·8896	·0543	·911	·887
28	250·9007	13	·1190	·2872	·4726	·709	·326
Oct. 8	34·0768	11	·5165	·6849	·8908	·507	·765
18	177·2529	09	·9140	·0826	·3091	·306	·204
28	320·4291	07	·3115	·4802	·7273	·105	·643
Nov. 7	103·6052	+·0005	·7090	·8779	·1456	·903	·082
17	246·7813	+·0003	·1065	·2755	·5638	·702	·521
27	29·9574	+·0001	·5041	·6732	·9821	·500	·960
Dec. 7	173·1335	−·0001	·9016	·0708	·4003	·299	·399
17	316·3096	−·0003	·2991	·4685	·8186	·097	·838
27	99·4857	−·0005	·6966	·8662	·2368	·896	·277
1893.							
Jan. 6	242·6618	−·0007	·0941	·2638	·6551	·694	·716
16	25·8379	09	·4916	·6615	·0734	·493	·155
26	169·0140	11	·8891	·0591	·4916	·291	·594
Feb. 5	312·1901	13	·2866	·4568	·9099	·090	·033
15	95·3662	15	·6842	·8544	·3281	·888	·472
25	238·5423	17	·0817	·2521	·7464	·687	·911
Mar. 7	21·7184	−·0019	·4792	·6498	·1646	·485	·350

	Inclination. γ_3	Node. $0-\Gamma_3$		Inclination. γ_3	Node. $0-\Gamma_3$
	°	°		°	°
1892 May 11	0·1336	121·48	1892 Oct. 8	0·1319	122·02
June 10	·1333	121·57	Nov. 7	·1315	122·15
July 10	·1330	121·67	Dec. 7	·1311	122·29
Aug. 9	·1326	121·78	1893 Jan. 6	·1307	122·44
Sept. 8	·1322	121·90	Feb. 5	·1303	122·59
Oct. 8	0·1319	122·02	Mar. 7	0·1299	122·75

Greenwich Noon.		*Third Satellite.* Arguments. ζ_3	η_3	θ_3	ι_3	*Fourth Satellite.* Longitude. l_4-O	S_4	Arg. a_4
1892.						°	°	
May	21	·163	·584	·418	·872	251·3648	−·0011	·28925
	31	·185	·605	·438	·269	107·0755	15	·88839
June	10	·207	·625	·459	·665	322·7863	20	·48753
	20	·228	·646	·479	·062	178·4970	24	·08667
	30	·250	·667	·500	·458	34·2077	29	·68581
July	10	·272	·688	·521	·855	249·9185	−·0034	·28496
	20	·294	·708	·541	·251	105·6292	38	·88410
	30	·315	·729	·562	·648	321·3400	43	·48324
Aug.	9	·337	·750	·582	·044	177·0507	48	·08238
	19	·359	·771	·603	·441	32·7614	52	·68152
	29	·381	·791	·624	·837	248·4722	57	·28067
Sept.	8	·402	·812	·644	·234	104·1829	−·0062	·87981
	18	·424	·833	·665	·630	319·8937	66	·47895
	28	·446	·854	·685	·027	175·6044	71	·07809
Oct.	8	·468	·874	·706	·423	31·3151	75	·67723
	18	·489	·895	·727	·820	247·0259	80	·27637
	28	·511	·916	·747	·216	102·7366	85	·87552
Nov.	7	·533	·937	·768	·613	318·4474	−·0089	·47466
	17	·555	·957	·788	·009	174·1580	·0094	·07380
	27	·576	·978	·809	·406	29·8688	·0098	·67294
Dec.	7	·598	·999	·829	·802	245·5796	·0103	·27208
	17	·620	·020	·850	·199	101·2903	·0107	·87123
	27	·642	·040	·871	·595	317·0011	·0112	·47037
1893.								
Jan.	6	·663	·061	·891	·992	172·7118	−·0117	·06951
	16	·685	·082	·912	·388	28·4225	·0121	·66865
	26	·707	·102	·932	·785	244·1333	·0126	·26779
Feb.	5	·729	·123	·953	·181	99·8440	·0130	·86694
	15	·750	·144	·974	·578	315·5548	·0134	·46608
	25	·772	·165	·994	·974	171·2655	·0139	·06522
Mar.	7	·794	·185	·015	·371	26·9762	−·0143	·66436

		Inclination. γ_4	Node. $\Omega-\Gamma_4$
1892.		°	°
May	11	0·3489	29·15
June	10	·3491	29·12
July	10	·3493	29·08
Aug.	9	·3495	29·04
Sept.	8	·3496	29·00
Oct.	8	0·3497	28·95

Fourth Satellite.

Greenwich Noon. 1892.	Arguments. β_4	γ_4	δ_4	ϵ_4	ζ_4	η_4	θ_4
May 21	·328	·623	·819	·108	·539	·364	·206
31	·127	·222	·414	·302	·739	·581	·405
June 10	·925	·821	·008	·496	·938	·797	·605
20	·724	·420	·603	·690	·137	·014	·804
30	·523	·019	·198	·883	·337	·231	·004
July 10	·321	·618	·792	·077	·536	·448	·203
20	·120	·217	·387	·271	·735	·664	·403
30	·918	·816	·981	·465	·935	·881	·602
Aug. 9	·717	·415	·576	·658	·134	·098	·802
19	·515	·014	·171	·852	·334	·315	·001
29	·314	·613	·765	·046	·533	·531	·201
Sept. 8	·112	·212	·360	·240	·732	·748	·400
18	·911	·811	·955	·434	·932	·965	·600
28	·709	·410	·549	·627	·131	·182	·799
Oct. 8	·507	·009	·144	·821	·330	·398	·999
18	·306	·608	·739	·015	·530	·615	·198
28	·105	·207	·331	·209	·729	·832	·398
Nov. 7	·903	·806	·928	·402	·929	·049	·597
17	·702	·405	·522	·596	·128	·266	·797
27	·500	·004	·117	·790	·328	·482	·996
Dec. 7	·299	·603	·712	·984	·527	·699	·196
17	·097	·202	·306	·178	·726	·916	·395
27	·896	·801	·901	·371	·925	·133	·595
1893. Jan. 6	·694	·400	·496	·565	·125	·349	·795
16	·493	·999	·090	·759	·324	·566	·994
26	·291	·598	·685	·953	·524	·783	·194
Feb. 5	·090	·197	·280	·146	·723	·000	·393
15	·888	·796	·874	·340	·922	·216	·593
25	·687	·395	·469	·534	·122	·433	·792
Mar. 7	·485	·994	·063	·728	·321	·650	·992

	Inclination. γ_4	Node. $\Omega-\Gamma_4$
1892 Oct. 8	0°·3497	28°·95
Nov. 7	·3497	28·90
Dec. 7	·3498	28·84
1893 Jan. 6	·3498	28·79
Feb. 5	·3497	28·73
Mar. 7	0·3496	28·68

Col. Cooper's Observatory:
Markree, Collooney, Ireland.

Note on the Conjunction of Venus and Jupiter observed in Australia, 1892 February 6. By A. Marth.

Mr. Russell, the Director of the Sydney Observatory, has been good enough to send me some letters which he has received referring to the conjunction of *Venus* and *Jupiter* on February 6. The weather in general seems to have been unfavourable. At Sydney "a dense mantle of cloud blotted out the planets the whole evening." But in some parts of New South Wales the sky has been more propitious and very clear.

At Gara Station, about ten miles from Armidale (lat. 30° 32′ S., long. 151° 38° E.), Mr. R. P. Sellors and a party of friends saw the planets separate till about $7^h\ 35^m$ Sydney M. T., but by $7^h\ 45^m$ they appeared as one.

At Monteagle, Bathurst, Mr. J. B. Dulhunty and a party of friends watched the two planets approaching conjunction, and at $7^h\ 40^m$ Sydney M. T. could not tell whether they did not appear to the naked eye as one star.

The distances between the rim of *Jupiter* and the nearest edge of the illuminated disc of *Venus* at the two times recorded at Gara Station were 98″ and 74″, so that the distance of the two edges at which the eyes of Mr. Sellors and his friends ceased to separate the two planets is between these limits.

Preliminary Address of the General Committee of the World's Congress Auxiliary on Mathematics and Astronomy.

The following circular has been received from Professor G. E. Hale:—

"The World's Congress Auxiliary is an organisation maintained by the World's Columbian Exposition, and approved by the Government of the United States, for the purpose of organising a series of Congresses or Conventions to be held during the progress of the Exposition in 1893, and which will bring together the leading scholars of the world for the mutual interchange of ideas on topics bearing on human progress.

"A scientific Congress to present and consider investigations in its special lines of research from all parts of the world, cannot fail to exert an important influence in the progress of scientific development. The personal interchange of views in regard to methods of observation and investigation will undoubtedly be productive of mutual benefit to the members of the Congress, as well as of lasting value to science.